

**REMARKS**

Claims 1, 5-6, 9-10 and 16-17 are pending with entry of this Amendment.

Please cancel Claims 7, 13 and 15 without prejudice.

Claims 1, 5-6, 9-10 and 16-17 stand rejected.

**Finality of the Action**

The finality of the Action is improper. On page 7, paragraph 11 of the Action, the Office states that Applicant's amendment necessitated the new ground(s) of rejection in the instant Office Action. In Applicant's amendment submitted on September 6, 2007, Applicant amended independent Claims 1 and 10 by incorporating the patentable elements of dependent claims thereon and providing arguments traversing the rejections premised upon the references of record, namely, Narita and Hoffmann. However, the Office provided a new set of references in the instant Action and concluded that Applicant's amendment necessitated the grounds of rejection. *It is improper for the Office to switch "from one set of references to another...in rejecting in successive actions claims of substantially the same subject matter."* See MPEP § 706.07 (emphasis supplied). In view of the improper finality asserted by the Office, Applicant respectfully requests reconsideration and withdrawal of the finality of this Action.

**Rejection under 35 U.S.C. § 112**

On pages 2-3 of the Action, the Office rejected Claims 1, 5-7, 9-10 and 17 under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Applicant has cancelled Claim 7 without prejudice. Applicant has amended Claims 1, 5-6, 9-10 and 17 to correct the informalities identified by the Office. Reconsideration and withdrawal of the rejection under 35 U.S.C. § 112 is respectfully requested.

**Rejection under 35 U.S.C. § 102**

On pages 3-4 of the Action, the Office improperly rejected Claims 10 and 15-17 under 35 U.S.C. § 102(e) as being unpatentable over Saichi. Applicant has cancelled Claim 15 without prejudice. While Applicant disagrees with the merits of the rejection, Applicant has amended independent Claims 10 and 17 to include the patentable elements contained in Claims 13<sup>1</sup> and 15. Thus, by admission of the Office, Saichi fails to teach each and every element of independent Claims 10 and 17, and Applicant respectfully requests reconsideration and withdrawal of the rejection of independent Claims 10 and 17.

Claim 16 is dependent upon independent Claim 10. Claim 10 is in condition for allowance. By virtue of dependency alone and without addressing the additional patentable elements thereof, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 16.

While Applicant's cancellation of Claim 15 renders the rejection thereof moot, Applicant will address the rejection of the subject matter of Claim 15 (now incorporated into independent Claims 1, 10 and 17). Applicant contends that the Office has misread and misapplied the teachings of Saichi. For example, Saichi discloses radial dynamic-

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<sup>1</sup> The rejection of the subject matter of Claim 13 is addressed below.

pressure generating grooves on at least one of the dynamic pressure surfaces on the bearing sleeve 22 and the rotating shaft 31 in two blocks of concave ring shapes separated in the axial direction. *See* Saichi at 5:36-43. In contrast, Claim 15 (now incorporated into independent Claims 1, 10 and 17) requires a groove on at least one of the *bonded* contact surfaces of either the bearing-rotor assembly (49) or the base plate (21). This groove, as claimed, is not a dynamic-pressure generating groove as disclosed in Saichi and is different than the claimed groove pattern (40) in Claim 10; rather, the groove of Claim 15 is a bonding groove inside the contact surface of the sleeve and the baseplate into which the adhesive penetrates. *See* paragraph [0031] of Applicant's published specification. Reconsideration of the rejection of the subject matter of Claim 15 is respectfully requested.

### **Rejections under 35 U.S.C. § 103**

#### **1. Claims 7 and 13**

At paragraph 7 on page 4 of the Action, the Office improperly rejected Claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Saichi. At paragraph 8 on page 6 of the Action, the Office improperly rejected Claim 7 under 35 U.S.C. § 103(a) as being upatentable over Saichi. While Applicant disagrees with the merits of the rejection, Applicant has cancelled Claims 7 and 13 and incorporated the patentable elements thereof into independent Claim 1 and independent Claims 10 and 17, respectively.

While the instant rejection is moot, Applicant will address the impropriety of the rejection of the subject matter of Claims 7 and 13 over Saichi. Saichi generally discloses

a hard disk drive (HDD) motor including a stator, rotor, shaft and a dynamic-pressure bearing arrangement. The HDD utilizes a fixing frame 21 screwed onto a fixed base. *See* Saichi at 4:44-51. The bearing arrangement supports the rotor and comprises a bearing sleeve that may include on one or more surfaces thereof radial or herringbone shaped grooves. During rotation, a pumping action of the grooves pressurizes lubricating fluid to generate dynamic pressure so that the rotating shaft and a rotating hub are supported in the radial direction. *See* Saichi at 5:36-43. Contained in the bearing sleeve are the shaft and a thrust plate affixed to the bottom end of the shaft. In close proximity to the thrust plate is a counter plate or disk closing off the bottom opening area of the bearing sleeve. *See* Saichi at 5:44-55. Saichi further describes a connection of the bearing sleeve with the bearing holder using a press fit or shrink fit. *See* Saichi at 4:61-64. The bearing sleeve is comprised of a copper-alloy material such as a phosphor bronze. *See* Saichi at 4:67.

The Office admits that Saichi fails to disclose a transition fit; however, the Office incorrectly asserts that it would have been obvious to one of ordinary skill in the art to utilize Applicant's claimed transition fit (now incorporated into independent Claims 1, 10 and 17) in place of the disclosed press or shrink fit of Saichi. The Office then incorrectly asserts that a transition fit is indistinguishable from a shrink fit or press fit without any support in the references of record. This mere assertion, without evidentiary support the references of record cannot provide a *prima facie* case of obviousness.

To the contrary, as addressed in Applicant's published specification at paragraphs

[0003]-[0004], press fitting or shrink fitting causes deformations of the bore inside the bearing sleeve in the range of about half a micron to one micron. With such a bearing gap, this leads to a bearing with at least high load causing a shorter lifespan of a respective Hard Disk Drive (HDD). Furthermore, the different materials utilized for the baseplate (aluminum) and the sleeve (steel) of Saichi promote different expansions due to temperature changes or differences. This results in deviations of the bearing gap and eventually a total breakdown of a respective HDD.

In contrast to the disclosure of Saichi, Applicant's claimed subject matter utilizes a transition fit of the bearing sleeve and the baseplate (rather than a fixing frame) together with bonding. Through this claimed method and respective apparatus, the dimensions of the bearing sleeve and the bearing hole are not changed during assembly. Therefore, re-machining of the assembly is no longer required as it would be with the apparatus and method of Saichi due to the heavy deformations of the bearing bore inside the sleeve. Therefore, utilizing a transition fit together with bonding is clearly not obvious in view of the disclosure of Saichi, and the Office has failed to provide any *prima facie* evidence to the contrary. Reconsideration and withdrawal of the rejection of the subject matter of Claims 7 and 13 are respectfully solicited.

2. Claims 1, 6, 7 and 9

At paragraph 8 spanning pages 5-6 of the Action the Office improperly rejected Claims 1, 6-7 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Saichi over Lindsay. Applicant has addressed the patentable elements of Claim 7 above. Claim 1

has been amended to incorporate the patentable elements of Claims 7 and 15 and is allowable over Saichi as discussed in the preceding paragraph. As Lindsay is merely utilized for the teaching of testing a bearing component, the Office has not asserted that Lindsay supplements the deficiencies Saichi discussed above. Reconsideration and withdrawal of the rejection of Claim 1 is respectfully solicited.

Claims 6 and 9 are dependent upon independent Claim 1. Claim 1 is in condition for allowance. By virtue of dependency alone and without addressing the additional patentable elements thereof, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claims 6 and 9.

3. Claim 5

At paragraph 9 of the Action the Office improperly rejected Claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Saichi and Lindsay in view of Hoffmann. Claim 5 is dependent upon independent Claim 1. Claim 1 is in condition for allowance. By virtue of dependency alone and without addressing the additional patentable elements thereof, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 5.

**Conclusion**

Reconsideration and withdrawal of the rejection of Claims 1, 5-6, 9-10 and 16-17 are respectfully requested.

The Applicant believes that the present application is in condition for allowance and an Action to this effect is respectfully requested.

Should any fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of the same, such a petition is made and the Office is authorized to charge such fees to Deposit Account No. 04-1679.

The Office is invited to contact the undersigned to discuss any issue relating to this application.

Respectfully submitted,

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